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18 August 1966

MEMORANDUM FOR: Deputy Director for Support

SUBJECT : Conversion of Computer Applications from the RCA 501
to IBM 360

1. In response to your request, the following represents the opinions of the Support Systems Staff with regard to the impact a straight one for one conversion from the 501 to the 360 will have on the Support Directorate. This study was made solely "in house" without benefit of any current OCS planned conversion schedules or specific conversion objectives.

a. Impact on Regulations, Handbooks, Operating Procedures, etc.

Very little, if any, change is anticipated in existing regulations or procedures due solely to conversion. A straight conversion effort generally is accomplished by using the same inputs and we should expect this to remain so in any OCS conversion plans.

b. Conversion Versus New Design

(1) A straight one for one conversion at this time could materially hinder the total systems study now being made by the Support Systems Staff. While we recognize the current maintenance and production problems faced by OCS, we feel that hardware oriented solutions offer few benefits beyond the very immediate future. The systems study now under way is directed toward the long range goal of creating an integrated data processing and management information system to solve the deficiencies in our present system. We must look to OCS to provide the technical expertise if the study is to be completed within reasonable time frames. The total system study would suffer to the extent that necessary OCS participation in the long range goal might not be available due to its concentration on a straight conversion. In addition there are important considerations from the overall Agency viewpoint in terms of economics and timing.

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(2) OCS planning information available to this Staff indicates a requirement for fifty additional OCS Analysts/Programmers to effect a conversion with possible completion early in fiscal year 1968. Assuming this requirement would be met by hiring staff personnel in the GS-grade levels of 9-13, personnel costs alone would amount to approximately \$500,000 for the one year period.

(3) Notwithstanding the possibility that a straight conversion might eventually result in improved computer techniques to the point that OCS could better respond to users' current needs, such conversion would retain all of the system limitations of the present 501 system. None of the improvements envisioned in the new integrated management information system would be accomplished at this time. It is our understanding that a newly designed system would require additional reprogramming approximately equal to that devoted to conversion.

(4) The OCS' estimate for completion of conversion within a one year period is based on the availability of 50 people to concentrate on conversion. Presumably any delay in hiring personnel will extend the completion proportionately. If we consider the time required for advertising, recruitment, security clearance, and EOD processing, we automatically extend the completion date by 4-6 months. This, coupled with the overall industry competition for analyst/programmer talent could well extend a planned one year conversion into two or possibly three years.

(5) We estimate that the Material Resources portion of a newly designed Support management information system can be ready for programming by June 1967 with the Financial and Human Resources portions following in three to six month intervals. To do this, however, will require the assignment of at least six OCS Analysts/Programmers to work with the Support Systems Staff.

2. We believe the commitment of approximately \$500,000 in funds and one to three years in time to accomplish a straight one for one conversion without any significant progress toward our goal of an

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integrated system is not justified and the Agency's best interest would be served by concentrating on completing the new system within the above time frame. It is recognized that some relief must be found for the 501 workload to permit OCS to respond to users' current system needs until a new system is implemented. Hopefully, relief can be obtained by providing some method of tie-in between the 501 and 360 to handle the 501 overflow. In addition, OCS personnel eventually earmarked for the 360 might possibly be trained in 501 programming as an interim measure. These possibilities, however, involve questions beyond our capacity to evaluate without discussion with OCS. It is likely that such ideas have already been considered by OCS. A OCS/DDS effort to explore these and other possibilities could be of mutual benefit.



DDS/Support Systems Staff

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